

JC10 Rec'd PCT/PTO 19 DEC 2001

FORM PTO 1390 (REV. 11-2000)	U S DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY DOCKET NUMBER 2542-00034
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		U.S. APPLICATION NO (if known, see 37 CFR 1.5) 10/018987

INTERNATIONAL APPLICATION NO. PCT/FI00/00543	INTERNATIONAL FILING DATE 16 June 2000	PRIORITY DATE CLAIMED 30 June 1999
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TITLE OF INVENTION STEERING ARRANGEMENT FOR MOBILE X-RAY APPARATUS
APPLICANT(S) FOR DO/EO/US Jarmo LUUSUA; Petri POHJOISPURO; Petri PYRRÖ

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.
4. The US has been elected by the expiration of 19 months from the priority date (Article 31).
5. A copy of the International Application as filed (35 U.S.C. 371(c)(2))
 - a. is attached hereto (required only if not communicated by the International Bureau).
 - b. has been communicated by the International Bureau.
 - c. is not required, as the application was filed in the United States Receiving Office (RO/US).
6. A English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
 - a. is attached hereto.
 - b. has been previously submitted under 35 U.S.C. 154(d)(4).
7. Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
 - a. are attached hereto (required only if not communicated by the International Bureau).
 - b. have been communicated by the International Bureau.
 - c. have not been made; however, the time limit for making such amendments has NOT expired.
 - d. have not been made and will not be made.
8. A English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. A English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11 to 20 below concern other document(s) or information included:

11. An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. A FIRST preliminary amendment.
14. A SECOND or SUBSEQUENT preliminary amendment.
15. A substitute specification.
16. A change of power of attorney and/or address letter.
17. A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821-1.825.
18. A second copy of the published international application under 35 U.S.C. 154(d)(4).
19. A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
20. Other items or information:
 - Applicant claims small entity status.
 - Supplement to Transmittal Letter.

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U.S. APPLICATION NO. (if known, see 37 CFR 1.1)	INTERNATIONAL APPLICATION NO.	ATTORNEY'S DOCKET NUMBER	
10/018987	PCT/FI00/00543	2542-00034	
21. <input checked="" type="checkbox"/> The following fees are submitted:		CALCULATIONS PTO USE ONLY	
Basic National Fee (37 CFR 1.492(a)(1)-(5)):			
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO.....		\$ 1,040.00	
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO.....		\$ 890.00	
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO		\$ 740.00	
International preliminary examination fee (37 CFR 1.482).paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4)..		\$ 710.00	
International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims satisfied provisions of PCT Article 33(1)-(4).....		\$ 100.00	
ENTER APPROPRIATE BASIC FEE AMOUNT =		\$1,040.00	
Surcharge of \$130.00 for furnishing the oath or declaration later than months from the earliest claimed priority date (37 C.F.R. 1.491(3)).		<input type="checkbox"/> 20 <input checked="" type="checkbox"/> 30 + 130.00	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE
Total Claims	6 - 20 =		x \$ 18.00
Independent Claims	1 - 3 =		x \$ 84.00
MULTIPLE DEPENDENT CLAIM(S) (if applicable)		+ \$280.00	
		TOTAL OF ABOVE CALCULATIONS =	\$1,170.00
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.		-	
SUBTOTAL =		\$1,170.00	
Processing fee of \$130.00 for furnishing the English Translation later than months from the earliest claimed priority date (37 C.F.R. 1.492(f)).		<input type="checkbox"/> 20 <input type="checkbox"/> 30 +	
TOTAL NATIONAL FEE =		\$1,170.00	
Fee for recording the enclosed assignment (37 C.F.R. 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 C.F.R. 3.28, 3.31). \$40.00 per property		+	
TOTAL FEES ENCLOSED =		\$1,170.00	
		Amount to be refunded:	
		Charged:	
a. <input checked="" type="checkbox"/> A check in the amount of \$ 1,170.00 to cover the above fees is enclosed. b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed. c. <input type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>01_2000</u> . A duplicate copy of this sheet is enclosed. d. <input type="checkbox"/> Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.			
NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.			
SEND ALL CORRESPONDENCE TO: ANDRUS, SCEALES, STARKE & SAWALL, LLP 100 East Wisconsin Avenue, Suite 1100 Milwaukee, Wisconsin 53202 Phone: (414) 271-7590 Fax: (414) 271-5770		 Signature Date <u>12/19/01</u> Daniel D. Fetterley Name Reg. No. <u>20,323</u>	

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19 DEC 2001

U.S. APPLICATION NO. (if known) / see 37 CFR 1.5 10701898	INTERNATIONAL APPLICATION NO. PCT/FI/00/00543	ATTORNEY'S DOCKET NUMBER 2542-00034
CERTIFICATE OF EXPRESS MAIL		
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as EXPRESS MAIL-POST OFFICE TO ADDRESSEE, in an envelope addressed to: BOX PCT, COMMISSIONER OF PATENTS AND TRADEMARKS, WASHINGTON, D.C. 20231 on the <u>19th</u> day of December, 2001. Express Mail Label <u>EL812732781US</u> .		
Daniel D. Fetterley Name	20,323 Reg. No.	
<u>Daniel D. Fetterley</u> Signature	<u>12/19/01</u> Date	

10/018987
531 Rec'd PTO 19 DEC 2001
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of) Group Art Unit:
JARMO LUUSUA ET AL.)
Int'l. Appln. No. PCT/FI00/00543) Examiner:
Int'l. Filing Date: 15 June 2000) STEERING ARRANGEMENT FOR MOBILE
X-RAY APPARATUS

SUPPLEMENT TO TRANSMITTAL LETTER

Milwaukee, Wisconsin 53202
December 18, 2001

Box PCT Application
Commissioner for Patents
Washington, D.C. 20231

Sir:

Entry of this application into the National Phase in the United States is pursuant to 37 C.F.R. §1.494(c)/1.495(c). The papers include an English language specification and claims, and the drawing. The oath or declaration of the applicant is not included. The declaration will be forwarded promptly upon notification from the U.S. Patent and Trademark Office.

Respectfully submitted,

ANDRUS, SCEALES, STARKE & SAWALL, LLP

Daniel D. Fetterley

Daniel D. Fetterley (Reg. No. 20,323)

100 East Wisconsin Avenue, Suite 1100
Milwaukee, Wisconsin 53202
(414) 271-7590
Atty. Docket No.: 2542-00034 (C.12052-101)

CERTIFICATE OF EXPRESS MAIL

I hereby certify that this correspondence is being deposited with the United States Postal Service, with sufficient postage, as EXPRESS MAIL - POST OFFICE TO ADDRESSEE, in an envelope addressed to: Box PCT Application, Commissioner for Patents, Washington, D.C. 20231 on the 19th day of December, 2001. The Express Mail label number is EL812732781US.

Daniel D. Fetterley	20,323
Name	Reg. No.
<i>Daniel D. Fetterley</i>	12/19/01
Signature	Date

10/018987
531 Rec'd PCT/PK 19 DEC 2001 PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of) Group Art Unit: #2/
JARMO LUUSUA ET AL.)
Int'l. Appln. No. PCT/FI00/00543) Examiner:
Int'l. Filing Date: 16 June 2000) STEERING ARRANGEMENT FOR
) MOBILE X-RAY APPARATUS

PRELIMINARY AMENDMENT

Milwaukee, Wisconsin 53202
December 18, 2001

Box PCT Application
Commissioner for Patents
Washington, D.C. 20231

Sir:

It is requested that U.S. national stage examination be carried out on the amended claims dated September 10, 2001. Prior to computing the filing fee in this application, kindly amend the above identified application, as follows. The filing fee is to be computed on the amended claims.

In the Abstract:

A clean copy of the Abstract as published is attached. No changes to the Abstract have been made.

In the Specification:

Please add the following paragraph at page 1, between the title and the first line of text as follows:

CROSS REFERENCE TO RELATED APPLICATION

The present application is the U.S. national stage application of International Application PCT/FI00/00543, filed June 16, 2000, which international application was published on January 11, 2001 as International Publication WO 01/01860 in the English

JARMO LUUSUA ET AL.

Atty. Docket No. 2542-00034

language. The International Application claims priority of Finnish Patent Application 991487, filed June 30, 1999.

SUMMARY OF THE INVENTION

Before the paragraph beginning at line 32 of page 1 insert the following:

BRIEF DESCRIPTION OF THE INVENTION

Before the paragraph beginning at line 11 of page 2 insert the following:

BRIEF DESCRIPTION OF THE DRAWING

Before the paragraph beginning at line 16 of page 2 insert the following:

DETAILED DESCRIPTION OF THE INVENTION

In the Claims:

Please amend claim 3 as follows:

3. (amended) An X-ray apparatus as claimed in claim 1, characterised in that the height of the driving handle (1, 2) is adjustable.

Please amend claim 4 as follows:

4. (amended) An X-ray apparatus as claimed in claim 1, characterised in that the apparatus further comprises release means (7-9) by which the motor means (12) can be released from the driving coupling with the driving wheels (17), allowing the wheels (17) to rotate freely and thus the manual transfer of the carriage.

Add the following new claim:

6. (new) An X-ray apparatus as claimed in claim 2, characterized in that the height of the driving handle (1,2) is adjustable.

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Atty. Docket No. 2542-00034

JARMO LUUSUA ET AL.

Entry of this amendment is respectfully requested.

Respectfully submitted,

ANDRUS, SCEALES, STARKE & SAWALL, LLP

Daniel D. Fetterley
(Reg. No. 20,323)

100 East Wisconsin Avenue, Suite 1100
Milwaukee, Wisconsin 53202
(414) 271-7590
Atty. Docket No. 2542-00034 (C.12052-101)

CERTIFICATE OF EXPRESS MAIL

I hereby certify that this correspondence is being deposited with the United States Postal Service, with sufficient postage, as EXPRESS MAIL - POST OFFICE ADDRESSEE, in an envelope addressed to: Box PCT Application, Commissioner for Patents, Washington, D.C. 20231 on the 19 H1 day of December, 2001. The Express Label is EL812732781US.

Daniel D. Fetterley	20,323
Name	Reg. No.
<i>Daniel D. Fetterley</i>	12/19/01
Signature	Date

10/018987
531 Record PCT 19 DEC 2001
VERSION WITH MARKINGS TO SHOW CHANGES MADE

Attorney Docket No. 2542-00034

In the specification:

Please add the following paragraph at page 1, between the title and the first line of text as follows:

CROSS REFERENCE TO RELATED APPLICATION

The present application is the U.S. national stage application of International Application PCT/FI00/00543, filed June 16, 2000, which international application was published on January 11, 2001 as International Publication WO 01/01860 in the English language. The International Application claims priority of Finnish Patent Application 991487, filed June 30, 1999.

SUMMARY OF THE INVENTION

Before the paragraph beginning at line 32 of page 1 insert the following:

BRIEF DESCRIPTION OF THE INVENTION

Before the paragraph beginning at line 11 of page 2 insert the following:

BRIEF DESCRIPTION OF THE DRAWING

Before the paragraph beginning at line 16 of page 2 insert the following:

DETAILED DESCRIPTION OF THE INVENTION

In the claims:

Claim 3 has been amended as follows:

3. (amended) An X-ray apparatus as claimed in claim 1—or 2, characterised in that the height of the driving handle (1, 2) is adjustable.

Claim 4 has been amended as follows:

Attorney Docket No. 2542-00034

4. (amended) An X-ray apparatus as claimed in claim 1any of the above claims, characterised in that the apparatus further comprises release means (7-9) by which the motor means (12) can be released from the driving coupling with the driving wheels (17), allowing the wheels (17) to rotate freely and thus the manual transfer of the carriage.

STEERING ARRANGEMENT FOR MOBILE X-RAY APPARATUS.

The present invention relates to a mobile X-ray apparatus which comprises a carriage provided with at least one pair of independently driven driving wheels
5 and their motor means, the carriage including a driving handle which comprises side bars and a crossbar extending between them, the said apparatus in addition comprising means responsive to the movement of the driving handle, which responsive means control the operation of the motor means in order to steer the carriage in the desired direction.

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The mobile X-ray apparatus comprises a carriage to which is connected an X-ray source, X-ray receiving means and the control electronics required, and possibly a monitor for immediate examination of, for example, digitally produced X-ray photographs. When accumulators are used as the power source of a mobile X-ray apparatus, the weight of the apparatus increases and may be, for example, of the order of 300 kg, which means that to make the apparatus lighter to move, the driving motion must be motorised. One way of controlling this type of a motorised X-ray apparatus is to provide a driving handle, the manual moving of which provides control signals for driving the motor means of the driving wheels of the carriage, in order to steer the carriage in the desired direction. One such solution is disclosed in US patent 4697661, in which the operation of the driving handle is based on converting the movement of the driving handle into a bending movement of the cantilevered arms arranged in the vicinity of the driving handle, the bending movement causing the said control signals to be produced. One object of the present invention is to achieve a new type of mobile X-ray apparatus in which the movement of the driving handle can be converted relatively simply and reliably into an electric signal controlling the control electronics of the motor means. An important additional object is to provide a motorised mobile X-ray apparatus which is additionally arranged to be manually movable without the 30 motor means in exceptional situations.

In order to achieve the objects of the invention, the mobile X-ray apparatus relating to the invention is characterised in that the side bars of the driving handle

- are attached to a rotation axis solidly fixed to the carriage, so as to turn about the axis; that the side bars and the crossbar are connected to each other in an articulated manner to allow the turning movement of the side bars about the said rotation axis to different extents and/or in different directions; that the side bars
5 are provided with means which move along with the turning movement of the respective side bar each time, and the movement of which means is measured by measuring means which convert the movement of the said means into an electric signal by means of which the operation of the motor means of the driving wheels is controlled.

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The invention is described in greater detail below, with reference to the appended drawing, the only figure of which shows a diagrammatic side view of the carriage part of the X-ray apparatus, without the actual X-ray imaging devices to be included in it.

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In accordance with the figure, the carriage comprises driving wheels 17, of which there is one on either side of the carriage and which are driven each time by means of a driving motor 12 via belts 13, 15. Belt 15 is tightened by means of tension springs 11 and a jockey pulley 18 connected to them for transmitting the
20 rotary movement of the driving motor 12 via the belt pulleys 14, 16 to the driving wheel 17. The operation of the driving motor 12 is controlled by means of a driving handle which comprises side bars 2 and a crossbar 1 attached between them in an articulated manner. The side bars 2 are attached to a rotation axis 3 solidly fixed to the carriage to make possible their turning movement about the
25 rotation axis 3. In the embodiment shown, to the rotation axis 3 end of the side bars is connected a part 4 of a toothed rim which moves together with the side bar 2 during the turning movement. This turning movement of the toothed rim 4 is measured, for example, by measuring means 10 realised as a potentiometer, which means converts the said movement into an electric signal which is fed to
30 the control electronics of the driving motors 12 in order to drive the driving motors to steer the carriage in the desired direction. The articulated joint between the side bars 2 and the crossbar 1 allows a turning movement of the side bars 2 to a different extent and, if necessary, in a different direction about the said rotation

axis 3 in order to make possible the desired direction of travel. When driving straight (forwards or backwards), the driving wheels rotate at mutually the same speed and in the same direction, but when turning left or right, one of the driving wheels must rotate slower than the driving wheel on the other side, or the driving
5 wheels must rotate in different directions.

In case of an exceptional situation, for example, when power is not switched on to the apparatus or if the batteries have ran down, the X-ray apparatus carriage relating to the invention is provided with means by which the driving motors 12
10 can be released from being driven together with the driving wheels 17 to allow the apparatus to be moved manually. In the embodiment shown, these means include a release plate 7 to which is attached a wire cable 9 which is connected to the jockey pulley 18 of the drive belt 15. When the driving handle is pushed or pulled considerably beyond the normal driving motion, the release plate 7 pulls the wire
15 cable 9 which in turn pulls the jockey pulley 18, thus allowing the drive belt 15 to slide over the belt pulley 14. This means that when the carriage is pushed or pulled, the wheels 17 are able to rotate although the drive motor 12 is at a halt by itself. When released from the driving handle, the tension springs 11 press the jockey pulley 18 against the drive belt 15, whereby the releasing of the driving
20 handle acts as a brake due to the drive motor being at a halt by itself. When the driving handle is pulled into the normal position, it locks in it. The normal driving motion of the driving handle is restricted by means of limit stops 5 and the movement of the release means is for its part restricted by means of a stopper plate 8. In connection with the toothed rim 4 are in addition preferably arranged
25 spring members 6 which position the driving handle in its centre position when the grip on the drive handle is released. The height of the driving handle is preferably arranged so as to be adjustable.

Claims

1. A mobile X-ray apparatus which comprises a carriage provided with at least one pair of independently driven driving wheels and their motor means (12), the carriage including a driving handle which comprises side bars (2) and a crossbar (1) extending between them, the said apparatus in addition comprising means responsive to the movement of the driving handle, which responsive means control the operation of the motor means (12) in order to steer the carriage in the desired direction, **characterised** in that the side bars (2) of the driving handle (1, 2) are attached to a rotation axis (3) solidly fixed to the carriage, so as to turn about the axis; that the side bars (2) and the crossbar (1) are connected to each other in an articulated manner to allow the turning movement of the side bars (2) about the said rotation axis to different extents and/or in different directions; that the side bars are provided with means (4) which move along with the turning movement of the respective side bar (2) each time, and the movement of which means is measured by measuring means (10) which convert the movement of the said means (4) into an electric signal by means of which the operation of the motor means (12) of the driving wheels (17) is controlled.
2. An X-ray apparatus as claimed in claim 1, **characterised** in that the apparatus comprises means (6) for positioning the driving handle (1, 2) automatically in its centre position when the grip on the driving handle is released.
3. An X-ray apparatus as claimed in claim 1 or 2, **characterised** in that the height of the driving handle (1, 2) is adjustable.
4. An X-ray apparatus as claimed in any of the above claims, **characterised** in that the apparatus further comprises release means (7-9) by which the motor means (12) can be released from the driving coupling with the driving wheels (17), allowing the wheels (17) to rotate freely and thus the manual transfer of the carriage.

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5. A mobile X-ray apparatus which comprises a carriage provided with at least one pair of independently driven driving wheels and their motor means (12), the carriage including a driving handle, the said apparatus in addition comprising means responsive to the movement of the driving handle, which responsive means control the operation of the motor means (12) in order to steer the carriage in the desired direction, **characterised** in that the apparatus further comprises release means (7-9) by which the motor means (12) can be released from the driving coupling with the driving wheels (17), allowing the wheels (17) to rotate freely and thus the manual transfer of the carriage, and having means to cause 10 braking of the carriage when the carriage is transferred manually.

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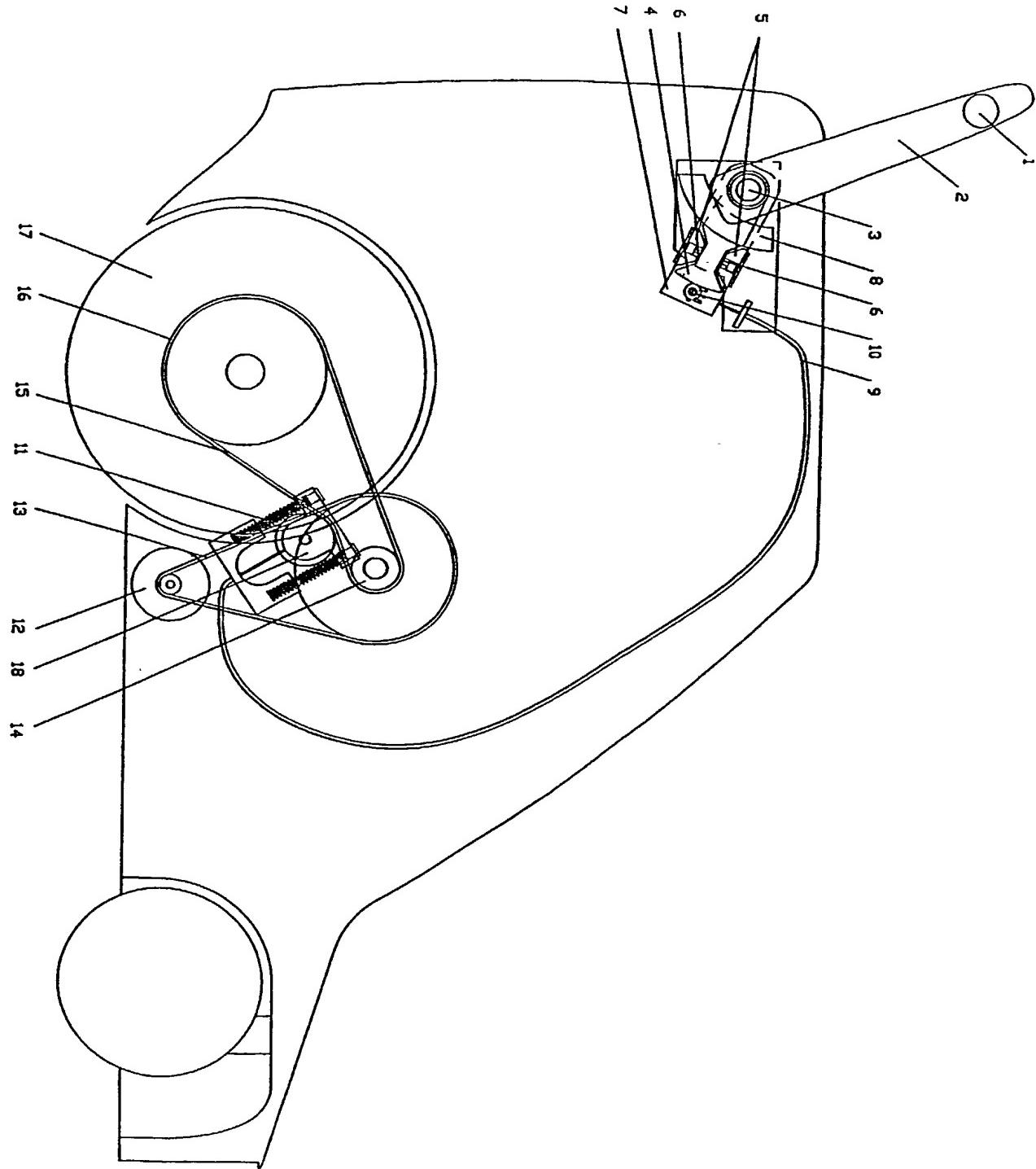
ABSTRACT OF THE DISCLOSURE

The invention relates to a mobile X-ray apparatus that comprises a carriage provided with at least one pair of independently driven driving wheels and their motor means (12). The carriage includes a driving handle, which comprises sidebars (2), attached to a rotation axis solidly fixed to the carriage, and a crossbar (1), which is connected to the sidebars in an articulated manner to allow the turning movement of the sidebars about the said axis independently of each other. The apparatus also comprises means for controlling the operation of the motor means by movements of the handle. The sidebars are provided with means (4) that move along with the movement of the respective sidebar (2). The movements are measured by measuring means (10), which convert the movement into an electric signal by means of which the motor means (12) of the driving wheels (17) are controlled.

WO 01/01860

10/018987
PCT/FI00/00543

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ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED

Type a plus sign (+) inside this box [+]

Approved for use through 9/30/00

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

PTO/SB/01 (8/96)	DECLARATION Declaration <input type="checkbox"/> Submitted with Initial Filing	Attorney Docket Number	2542-00034
OR		First Named Inventor	Jarmo Luusua
	<input checked="" type="checkbox"/> Submitted after Initial Filing	COMPLETE IF KNOWN	
	Application Number		
	Filing Date		
	Group Art Unit		
	Examiner Name		

As a below named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

STEERING ARRANGEMENT FOR MOBILE X-RAY APPARATUS

(Title of the Invention)

the specification of which
 is attached hereto

OR

was filed on (MM/DD/YYYY) 06/16/2000 as United States Application Number or PCT
International Number PCT/FI00/00543 and was amended on (MM/DD/YYYY) 09/10/2001
(if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37 Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code §119(a)-(d) or §365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Copy Attached?	
				YES	NO
991487	Finland	06/30/1999	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Additional foreign application numbers are listed on a supplemental priority sheet attached hereto:

I hereby claim the benefit under Title 35, United States Code §119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date (MM/DD/YYYY)	Additional provisional Application numbers are listed on a supplemental priority sheet attached hereto.
		<input type="checkbox"/>

Type a plus sign (+) inside this box [+]

DECLARATION

I hereby claim the benefit under Title 35, United States Code §120 of any United States application(s), or §365© of any PCT international application designated the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States of PCT International application in the manner provided by the first paragraph of Title 35, United States Code §112. I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application Number	PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number (if applicable)

Additional U.S. or PCT international application numbers are listed on a supplemental priority sheet attached hereto.
As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

Name	Registration Number	Name	Registration Number
Daniel D. Fetterley	<u>20,323</u>	Joseph D. Kuborn	<u>40,689</u>
George H. Solveson	<u>25,927</u>	Jeffrey S. Sokol	<u>35,686</u>
Gary A. Essmann	<u>29,376</u>	William L. Falk	<u>27,709</u>
Thomas M. Wozny	<u>28,922</u>		
Michael E. Taken	<u>28,120</u>		
Joseph J. Jochman, Jr.	<u>25,058</u>		

Additional attorney(s) and/or agent(s) named on a supplemental sheet attached hereto.
 Please direct all correspondence to: Name Daniel D. Fetterley
Address Andrus, Sceales, Starke & Sawall, LLP
Address 100 East Wisconsin Avenue, Suite 1100
City Milwaukee State Wisconsin Zip 53202-4178
Country United States Telephone (414) 271-7590 Fax (414) 271-5770

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

⑨

Name of Sole or First Inventor:	<input type="checkbox"/> A petition has been filed for this unsigned inventor						
Given Name (first and middle [if any])	Family Name or Surname						
Jarmo	Luusua						
Inventor's Signature	<i>Jarmo Luusua</i>	Date	03/25/2002				
RESIDENCE: City	Vantaa	State	FIN	Country	Finland	Citizenship	Finnish
POST OFFICE ADDRESS	Simonkalliontie 10 A 3						
City	Vantaa	State		Zip	FIN-01300	Country	Finland
<input type="checkbox"/> Additional inventors are being named on supplemental sheet(s) attached hereto.							

100

Name of Additional Joint Inventor, if any:	<input type="checkbox"/> A petition has been filed for this unsigned inventor						
Given Name (first and middle [if any])	Family Name or Surname						
Petri	Pohjoispuro						
Inventor's Signature	<i>Petri Pohjoispuro</i>	Date	03/25/2002				
RESIDENCE: City	Espoo	State	FIN	Country	Finland	Citizenship	Finland
POST OFFICE ADDRESS	Kuusiniementie 17 C 21						
City	Espoo	State		Zip	FIN-02710	Country	Finland
<input checked="" type="checkbox"/> Additional inventors are being named on supplemental sheet(s) attached hereto.							

Please type a plus sign (+) inside this box [+] .

DECLARATION		ADDITIONAL INVENTOR(S) Supplemental Sheet	
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Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any])		Family Name or Surname	

Petri Pyrö

Inventor's Signature	<i>Petri Pyrö</i>	Date	<i>03/25/2002</i>
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RESIDENCE: City	Lahela	State		Country	Finland	Citizenship	Finnish
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City	Lahela	State		Zip	FIN-04330	Country	Finland
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Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any])		Family Name or Surname	

Petri Pyrö

Inventor's Signature	<i>Petri Pyrö</i>	Date	
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RESIDENCE: City		State		Country		Citizenship	
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POST OFFICE ADDRESS							
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City		State		Zip		Country	
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Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any])		Family Name or Surname	

Petri Pyrö

Inventor's Signature	<i>Petri Pyrö</i>	Date	
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RESIDENCE: City		State		Country		Citizenship	
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POST OFFICE ADDRESS							
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City		State		Zip		Country	
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Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any])		Family Name or Surname	

Petri Pyrö

Inventor's Signature	<i>Petri Pyrö</i>	Date	
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RESIDENCE: City		State		Country		Citizenship	
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POST OFFICE ADDRESS							
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City		State		Zip		Country	
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